PROCEEDINGS

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THREE NEW SUBSPECIES OF PASSERELLA ILIACA.

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(Contribution from the Museum of Vertebrate Zoology of the University of California.)

The writer has been recently engaged in a study of the fox sparrows (Passerella iliaca and subspecies) with special reference to the manner of occurrence of the several forms in California. In the course of this work evidence was soon forthcoming demonstrating the existence of certain distinguishable local races, as yet unnamed, the terms megarhyncha and schistacea proving each to cover composites of several forms. As the proposed general account of the group will not be ready for publication for some time to come, it is desirable that designations be affixed to these subspecies in advance of the appearance of the longer paper.

One of the first fruits of the study was comprised in a better understanding of the race which Mailliard (Condor XX, 1918, p. 138) has named Passerella iliaca brevicauda, material gathered together from various sources by the present writer proving fortunately to include specimens which supplied Mr. Mailliard with the final evidence needed to demonstrate the distinctness of this subspecies. In the present paper three additional races are named, all from California. The total number of recognizable subspecies of Passerella iliaca is now sixteen, and all of these occur at some season within this State.

Passerella iliaca mariposae, new subspecies.

YOSEMITE FOX SPARROW

Type.—Adult male; no. 25693, Mus. Vert. Zool.; ridge at 7000 feet, near Chinquapin, Yosemite Park, California; June 10, 1915; collected by J. Grinnell; original number 3284.

Subspecific characters.—In bill structure intermediate between Passerella iliaca megarhyncha and P. i. stephensi. In megarhyncha the bill is broad and stubby, in mariposae it is relatively long, with more attenuated tip, just the same shape as in stephensi, but smaller. P. i. mariposae also differs from megarhyncha in its more grayish coloration. It is closely similar to stephensi in general appearance, save for the smaller bill; similar to monoensis in general appearance, but with larger bill. Geographically and structurally mariposae occupies an intermediate position between monoensis and stephensi.

Remarks.—Through the courtesy of the authorities of the United States National Museum I have been permitted to examine the type of Passerella megarhynchus Baird. This bird (U. S. Nat. Mus. no. 12402) was collected at Fort Teion, California, by Xantus, and while no date of capture is entered upon the label, it is obviously a winter collected specimen. Passerella i. megarhuncha is the "thick-billed sparrow" that is of most common occurrence in winter in southern California, but, contrary to previous belief, it is not the same as the "thick-billed sparrow" of the Sierra Nevada. P. i. megarhyncha has a stubby bill, and is of relatively brownish coloration; P. i. mariposae has a larger bill, more finely pointed, and is distinctly gray in color. The type specimen of megarhyncha is rather more gravish dorsally than the average of the race, but the shape of the bill in this specimen is outside the range of variation in P. i. mariposae. and exactly like that of the majority of the brown colored birds found commonly in winter in southern California.

Passerella i. mariposae, as shown by specimens at hand, occurs in summer from the vicinity of Mount Shasta south along the Sierra Nevada, on the west slope at least as far as the Yosemite region, on the east slope to Kearsarge Pass. There are a few winter examples of mariposae at hand from the San Diegan district, California, but so few that it is evident that these localities do not represent the main winter home of the race. On the other hand, megarhyncha occurs in this section in winter in abundance, but its breeding range is as yet not defined.

Passerella iliaca fulva, new subspecies.

WARNER MOUNTAINS FOX SPARROW.

Type.—Adult male; no. 14795, Mus. Vert. Zool.; Sugar Hill (5000 feet), Warner Mountains, Modoc County, California; May 19, 1910; collected by W. P. Taylor and H. C. Bryant; original number 2887.

Subspecific characters.—Bill intermediate in size between Passerella iliaca schistacea and P. i. mariposae; about the same size as in P. i. monoensis, but more slender and attenuated than the short but rather heavy bill of that subspecies. Coloration more brownish than in mariposae and monoensis; about as in schistacea. Wing and tail measurements somewhat less than in mariposae, about the same as in schistacea.

Remarks.—Size of bill alone suffices to distinguish Passerella i. fulva from any of the other fox sparrows save monoensis. From the latter form fulva may be told by the somewhat differently shaped bill, and by dif-

ference in coloration. In worn summer plumage color differences are more or less obscured, but in freshly molted fall specimens they are readily apparent.

There is a large series of specimens at hand from the Warner Mountains, the summer home of this subspecies, but there are no winter birds or migrants available indicating its range at other seasons.

Passerella iliaca canescens, new subspecies.

WHITE MOUNTAINS FOX SPARROW

Type.—Immature male (in nearly complete first winter plumage); no. 28439, Mus. Vert. Zool.; Wyman Creek at 8250 feet altitude, east slope of White Mountains, Inyo County, California; August 15, 1917; collected by A. C. Shelton; original number 3549.

Subspecific characters.—Most nearly similar to Passerella iliaca schistacea, under which name the White Mountains bird has formerly been included, but differing from that race in its much more grayish coloration.

Remarks.—This subspecies is based upon a series of twelve specimens from several points in the Boreal zone on the White Mountains, in Mono and Inyo counties, California. The series includes three adults in rather worn summer plumage, two adults undergoing the annual molt but mostly in the new winter plumage, one immature (the type) in nearly complete first winter plumage, and six in juvenile plumage, some of them showing a few feathers of the first winter plumage.

Comparisons with *P. i. schistacea* were made with series of breeding birds from northern Nevada and south central Oregon, and with migrants and winter visitants from various points in California. There are no noticeable differences in measurements between these two races, though, as *canescens* is at the minimum of bill development in the species, it is possible to make a selection of specimens of *schistacea* from certain parts of the range of that subspecies, showing very much larger bills.

The gray coloration of *canescens* as compared with the browner *schistacea* is least noticeable in abraded summer plumage, but in newly acquired fall plumage it is evident at a glance; in juveniles also the difference in color between the two subspecies is apparent, though to a lesser degree.

There are two winter birds at hand that appear to be referable to the subspecies *canescens*, one from Mount Wilson, Los Angeles County, California, the other from Blythe, Riverside County (on the Colorado River), California. These afford as yet our only clue as to the winter home of the race.